

Y. W. Chou

SECRET

Director, PIC

20 April 1959

Special Assistant to the Director, PIC

State of the Art of Electro Static and Organic Emulsions

1. In an attempt to find an emulsion which is not fogged by radiation and at the same time to find an emulsion which would give better resolution, acuity, and better all-around performance than silver halide, the following companies were visited or should be visited:

a. Companies visited and reported on:

STAT

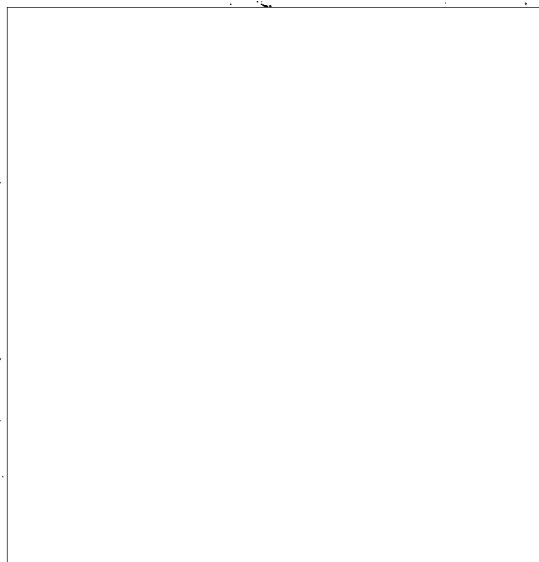
b. Companies and individuals not visited:

STAT

SECRET

SUBJECT: State of the Art of Electro Static and Organic Emulsions

STAT



2. It is the consensus of opinion of those people and companies visited that silver-halide emulsions will be the only means of recording an image photographically for at least the next two or three years. In the electro-static field an ASA of 2 is now being approached with resolutions between 50 and 100 l/mm. However, the registration of a full gray scale has not been possible as yet. The practical accomplishments thus far seem to be either black on white or several shades of gray just above white. The slow speed or ASA rating plus the fact that the emulsions are only really sensitive to ultra-violet light are the two basic problems in the organic chemistry field. The physicists and chemists are approaching this problem by attempting to cause a chain reaction to take place. A single example is shown:



The double bond to the oxygen molecule becomes a single bond to the original structure and attaches itself to the hydrogen molecule of the next structure.

3. The recommendations for finding a usable emulsion other than silver halide are:

a. Call on those companies and persons listed in paragraph 1b to determine the direction of their efforts and to furnish guidance if desired.

b. Approach those companies who are interested ^{in making} for a proposal for a research study with the end goal being a usable product.

SECRET

SUBJECT: State of the Art of Electro Static and Organic Emulsions

c. Continue to call on those companies [redacted]
[redacted] who prefer to conduct their own research programs
without a contract for the purpose of furnishing guidance
if they desire such.

STAT
STAT

d. Adopt and/or practice the technique as set forth in
the Ansco study on reducing the effects of radiation on silver
halide emulsions if the ideas set forth in the study prove
feasible. This would at least give a stop gap method to use
until other emulsions become available.

[redacted]
25X1

SECRET